1. Record Nr.   UNINA9910137551303321

   Titolo   Journal of Dr. NTR University of Health Sciences

   Pubbl/distr/stampa   Mumbai : , : Medknow Publications, , 2012-2022

   Descrizione fisica   1 online resource (11 volumes)

   Disciplina   [E]

   Soggetti   Health
                          Medicine
                          Santé
                          Médecine
                          Periodicals.
                          Periodicals
                          Zeitschrift

   Lingua di pubblicazione Inglese

   Formato   Materiale a stampa

   Livello bibliografico Periodico

2. Record Nr.	UNINA9910741194203321
Autore	Penprase Bryan E.
Titolo	STEM Education for the 21st Century / / by Bryan Edward Penprase
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
ISBN	9783030416331
	303041633X
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (145 pages)
Disciplina	507.11
Soggetti	Learning, Psychology of
	Educational technology
	Science - Study and teaching
	Mathematics - Study and teaching
	Education, Higher
	Instructional Psychology
	Digital Education and Educational Technology
	Science Education
	Mathematics Education
	Higher Education
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Chapter 1 The Context of STEM in US Higher Education -- Chapter 2 Active Learning and Peer-based Learning -- Chapter 3 Theories of Teaching and Learning -- Chapter 4 Online Education in STEM -- Chapter 5 Engineering Education Reconsidered -- Chapter 6 Interdisciplinary Science Education -- Chapter 7 The Future of STEM Teaching and Learning.
Sommario/riassunto	This book chronicles the revolution in STEM teaching and learning that has arisen from a convergence of educational research, emerging technologies, and innovative ways of structuring both the physical space and classroom activities in STEM higher education. Beginning with a historical overview of US higher education and an overview of diversity in STEM in the US, the book sets a context in which our

present-day innovation in science and technology urgently needs to provide more diversity and inclusion within STEM fields. Research-validated pedagogies using active learning and new types of research-based curriculum is transforming how physics, biology and other fields are taught in leading universities, and the book gives profiles of leading innovators in science education and examples of exciting new research-based courses taking root in US institutions. The book includes interviews with leading scientists and educators, case studies of new courses and new institutions, and descriptions of site visits where new trends in 21st STEM education are being developed. The book also takes the reader into innovative learning environments in engineering where students are empowered by emerging technologies to develop new creative capacity in their STEM education, through new centers for design thinking and liberal arts-based engineering. Equally innovative are new conceptual frameworks for course design and learning, and the book explores the concepts of Scientific Teaching, Backward Course Design, Threshold Concepts and Learning Taxonomies in a systematic way with examples from diverse scientific fields. Finally, the book takes the reader inside the leading centers for online education, including Udacity, Coursera and EdX, interviews the leaders and founders of MOOC technology, and gives a sense of how online education is evolving and what this means for STEM education. This book provides a broad and deep exploration into the historical context of science education and into some of the cutting-edge innovations that are reshaping how leading universities teach science and engineering. The emergence of exponentially advancing technologies such as synthetic biology, artificial intelligence and materials sciences has been described as the Fourth Industrial Revolution, and the book explores how these technologies will shape our future will bring a transformation of STEM curriculum that can help students solve many the most urgent problems facing our world and society.